

Environmental Protection Agency

§ 89.508

alternative selection procedure may be employed, provided the manufacturer requests approval of the alternative procedure prior to the start of test sample selection, and the Administrator approves the procedure.

(b) The manufacturer must assemble the test engines of the family selected for testing using its normal mass production process for engines to be distributed into commerce. If, between the time the manufacturer is notified of a test order and the time the manufacturer finishes selecting test engines, the manufacturer implements any change(s) in its production processes, including quality control, which may reasonably be expected to affect the emissions of the engines selected, then the manufacturer must, during the audit, inform the Administrator of such changes. If the test engines are selected at a location where they do not have their operational and emission control systems installed, the test order will specify the manner and location for selection of components to complete assembly of the engines. The manufacturer must assemble these components onto the test engines using normal assembly and quality control procedures as documented by the manufacturer.

(c) No quality control, testing, or assembly procedures will be used on the test engine or any portion thereof, including parts and subassemblies, that have not been or will not be used during the production and assembly of all other engines of that family, unless the Administrator approves the modification in assembly procedures pursuant to paragraph (b) of this section.

(d) The test order may specify that an EPA enforcement officer(s) or authorized representative(s), rather than the manufacturer, select the test engines according to the method specified in the test order.

(e) The order in which test engines are selected determines the order in which test results are to be used in applying the sampling plan in accordance with § 89.510.

(f) The manufacturer must keep on hand all untested engines, if any, comprising the test sample until a pass or fail decision is reached in accordance with § 89.510(e). The manufacturer may

ship any tested engine which has not failed the requirements as set forth in § 89.510(b). However, once the manufacturer ships any test engine, it relinquishes the prerogative to conduct retests as provided in § 89.508(i).

[59 FR 31335, June 17, 1994. Redesignated at 63 FR 56996, Oct. 23, 1998]

§ 89.508 Test procedures.

(a)(1) For nonroad engines subject to the provisions of this subpart, the prescribed test procedures are the nonroad engine 8-mode test procedure as described in subpart E of this part, the federal smoke test as described in part 86, subpart I of this chapter, and the particulate test procedure as adopted in the California Regulations for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines. This procedure is incorporated by reference. See § 89.6.

(2) The Administrator may, on the basis of a written application by a manufacturer, prescribe test procedures other than those specified in paragraph (a)(1) of this section for any nonroad engine he or she determines is not susceptible to satisfactory testing using the procedures specified in paragraph (a)(1) of this section.

(b)(1) The manufacturer may not adjust, repair, prepare, or modify the engines selected for testing and may not perform any emission tests on engines selected for testing pursuant to the test order unless this adjustment, repair, preparation, modification, and/or tests are documented in the manufacturer's engine assembly and inspection procedures and are actually performed or unless these adjustments and/or tests are required or permitted under this subpart or are approved in advance by the Administrator.

(2) The Administrator may adjust or cause to be adjusted any engine parameter which the Administrator has determined to be subject to adjustment for certification and Selective Enforcement Audit testing in accordance with § 89.108, to any setting within the physically adjustable range of that parameter, as determined by the Administrator in accordance with § 89.108, prior to the performance of any tests. However, if the idle speed parameter is one which the Administrator has determined to be subject to adjustment, the

Administrator may not adjust it to any setting which causes a lower engine idle speed than would have been possible within the physically adjustable range of the idle speed parameter if the manufacturer had accumulated 125 hours of service on the engine under paragraph (c) of this section, all other parameters being identically adjusted for the purpose of the comparison. The manufacturer may be requested to supply information needed to establish an alternate minimum idle speed. The Administrator, in making or specifying these adjustments, may consider the effect of the deviation from the manufacturer's recommended setting on emission performance characteristics as well as the likelihood that similar settings will occur on in-use engines. In determining likelihood, the Administrator may consider factors such as, but not limited to, the effect of the adjustment on engine performance characteristics and surveillance information from similar in-use engines.

(c) *Service Accumulation.* Prior to performing exhaust emission testing on an SEA test engine, the manufacturer may accumulate on each engine a number of hours of service equal to the greater of 125 hours or the number of hours the manufacturer accumulated during certification on the emission data engine corresponding to the family specified in the test order.

(1) Service accumulation must be performed in a manner using good engineering judgment to obtain emission results representative of normal production engines. This service accumulation must be consistent with the new engine break-in instructions contained in the applicable owner's manual.

(2) The manufacturer must accumulate service at a minimum rate of 16 hours per engine during each 24-hour period, unless otherwise approved by the Administrator.

(i) The first 24-hour period for service begins as soon as authorized checks, inspections, and preparations are completed on each engine.

(ii) The minimum service or mileage accumulation rate does not apply on weekends or holidays.

(iii) If the manufacturer's service or target is less than the minimum rate specified (16 hours per day), then the

minimum daily accumulation rate is equal to the manufacturer's service target.

(3) Service accumulation must be completed on a sufficient number of test engines during consecutive 24-hour periods to assure that the number of engines tested per day fulfills the requirements of paragraphs (g)(1) and (g)(2) of this section.

(d) The manufacturer may not perform any maintenance on test engines after selection for testing, nor may the Administrator allow deletion of any engine from the test sequence, unless requested by the manufacturer and approved by the Administrator before any engine maintenance or deletion.

(e) The manufacturer must expeditiously ship test engines from the point of selection to the test facility. If the test facility is not located at or in close proximity to the point of selection, the manufacturer must assure that test engines arrive at the test facility within 24 hours of selection. The Administrator may approve more time for shipment based upon a request by the manufacturer accompanied by a satisfactory justification.

(f) If an engine cannot complete the service accumulation or an emission test because of a malfunction, the manufacturer may request that the Administrator authorize either the repair of that engine or its deletion from the test sequence.

(g) Whenever a manufacturer conducts testing pursuant to a test order issued under this subpart, the manufacturer must notify the Administrator within one working day of receipt of the test order as to which test facility will be used to comply with the test order. If no test cells are available at a desired facility, the manufacturer must provide alternate testing capability satisfactory to the Administrator.

(1) A manufacturer with projected nonroad engine sales for the United States market for the applicable year of 7,500 or greater must complete emission testing at a minimum rate of two engines per 24-hour period, including each voided test and each smoke test.

(2) A manufacturer with projected nonroad engine sales for the United States market for the applicable year

of less than 7,500 must complete emission testing at a minimum rate of one engine per 24-hour period, including each voided test and each smoke test.

(3) The Administrator may approve a lower daily rate of emission testing based upon a request by a manufacturer accompanied by a satisfactory justification.

(h) The manufacturer must perform test engine selection, shipping, preparation, service accumulation, and testing in such a manner as to assure that the audit is performed in an expeditious manner.

(i) *Retesting.* (1) The manufacturer may retest any engines tested during a Selective Enforcement Audit once a fail decision for the audit has been reached in accordance with § 89.510(e).

(2) The Administrator may approve retesting at other times based upon a request by the manufacturer accompanied by a satisfactory justification.

(3) The manufacturer may retest each engine a total of three times. The manufacturer must test each engine or vehicle the same number of times. The manufacturer may accumulate additional service before conducting a retest, subject to the provisions of paragraph (c) of this section.

(j) A manufacturer must test engines with the test procedure specified in subpart E of this part to demonstrate compliance with the exhaust emission standard (or applicable FEL) for oxides of nitrogen. If alternate procedures were used in certification pursuant to § 89.114, then those alternate procedures must be used.

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§ 89.509 Calculation and reporting of test results.

(a) Initial test results are calculated following the applicable test procedure specified in § 89.508(a). The manufacturer rounds these results, in accordance with ASTM E29-93a, to the number of decimal places contained in the applicable emission standard expressed to one additional significant figure. This procedure has been incorporated by reference. See § 89.6.

(b) Final test results are calculated by summing the initial test results derived in paragraph (a) of this section

for each test engine, dividing by the number of tests conducted on the engine, and rounding in accordance with the procedure specified in paragraph (a) of this section to the same number of decimal places contained in the applicable standard expressed to one additional significant figure.

(c) Within five working days after completion of testing of all engines pursuant to a test order, the manufacturer must submit to the Administrator a report which includes the following information:

(1) The location and description of the manufacturer's exhaust emission test facilities which were utilized to conduct testing reported pursuant to this section;

(2) The applicable standards and/or FEL against which the engines were tested;

(3) A description of the engine and its associated emission-related component selection method used;

(4) For each test conducted;

(i) Test engine description, including:

(A) Configuration and engine family identification;

(B) Year, make, and build date;

(C) Engine identification number; and

(D) Number of hours of service accumulated on engine prior to testing;

(ii) Location where service accumulation was conducted and description of accumulation procedure and schedule;

(iii) Test number, date, test procedure used, initial test results before and after rounding, and final test results for all exhaust emission tests, whether valid or invalid, and the reason for invalidation, if applicable;

(iv) A complete description of any modification, repair, preparation, maintenance, and/or testing which was performed on the test engine and has not been reported pursuant to any other paragraph of this subpart and will not be performed on all other production engines;

(v) Where an engine was deleted from the test sequence by authorization of the Administrator, the reason for the deletion;

(vi) Any other information the Administrator may request relevant to the determination as to whether the new engines being manufactured by the